

Amendment

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Serial No.: 10/579,248

Confirmation No.: 7812

Filed: February 28, 2007

For: BIOTIN-FACILITATED TRANSPORT IN GRAM NEGATIVE BACTERIA

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (Currently amended) A method for introducing a compound into a Gram negative bacterial cell, the method comprising contacting the cell with a biotinylated compound, wherein the compound comprises a peptide ~~or a peptidomimetic~~.
2. (Previously Presented) The method of claim 1 wherein the contact is effective to deliver the compound into the cytosol of the cell.
3. (Original) A method for introducing a compound into a Gram negative bacterial cell, the method comprising contacting the cell, in the absence of a membrane-permeabilizing agent, with a biotinylated compound.
4. (Original) The method of claim 3 wherein the contact is effective to deliver the compound into the cytosol of the cell.
5. (Original) A method for identifying a compound having antimicrobial activity comprising:
 - contacting a Gram negative bacterial cell with biotinylated compound to cause uptake of the biotinylated compound by the cell;
 - determining whether the biotinylated compound has an antimicrobial effect on the cell.
6. (Previously Presented) The method of claim 1 or 5 wherein the cell is contacted with the biotinylated compound in the absence of a membrane-permeabilizing agent.

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7. (Currently Amended) The method of claims 3 or 5 wherein the compound comprises a peptide ~~or a peptidomimetic~~.
8. (Previously Presented) The method of any of claims 1, 3 or 5 further comprising linking a biotin moiety to the compound to yield the biotinylated compound.
- 9-20. (Cancelled)
21. (Currently Amended) The method of claim 1 wherein the peptide or peptidomimetic is conjugated to first and second bioactive compounds, wherein the first [[a]] bioactive compound comprises biotin.
22. (Previously Presented) The method of any of claims 1, 3 or 5 wherein the Gram negative bacterial cell is a cell of the genus *Escherichia*, *Salmonella*, or *Pseudomonas*.
23. (Previously Presented) The method of claim 22 wherein the Gram negative bacterial cell is an *E. coli* cell, a *S. typhimurium* cell, or a *P. aeruginosa* cell.
24. (Previously Presented) The method of any of claims 1, 3 or 5 wherein the Gram negative bacterial cell comprises a biotin transporter.
25. (Original) The method of claim 24 where the biotin transporter comprises a *birB/bioP* transporter.
26. (Original) The method of any of claims 1, 3 or 5 wherein the compound comprises a therapeutic, diagnostic or imaging agent.

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27. (Previously Presented) The method of claim 26 wherein the compound further comprises a targeting moiety that specifically targets a Gram negative bacterial cell.

28. (Original) The method of claim 27 wherein the targeting moiety comprises a receptor ligand or an antibody or fragment thereof.

29. (Previously Presented) The method of claim 26 wherein the compound comprises an antibiotic.

30-31. (Cancelled)

32. (Previously Presented) The method of any of claims 1, 3 or 5 wherein the Gram negative bacterial cell is a pathogen.

33. (Previously Presented) The method of any of claims 1, 3 or 5 wherein the compound, when introduced into the cell, inhibits the growth of the cell.

34. (Previously Presented) The method of any of claims 1, 3 or 5 wherein the compound, when introduced into the cell, causes the death of the cell.

35. (Previously Presented) The method of any of claims 1, 3 or 5 performed in the absence of calcium chloride.

36-42. (Cancelled)

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43. (New) A method for introducing a compound into a Gram negative bacterial cell, the method comprising contacting the cell with a biotinylated compound, wherein the compound comprises (a) a peptidomimetic comprising at least one component selected from the group consisting of a D-amino acid, 3-hydroxyproline, 2-aminopimelic acid and dimethyl lysine, or (b) a peptidomimetic comprising a polypeptide backbone in which at least one peptide bonds is replaced by another type of chemical bond, or a polypeptide backbone in which at least one of the backbone carbon or nitrogen atoms is replaced with a different atom.